

**IN THE OFFICE OF THE STATE ENGINEER
OF THE STATE OF NEVADA**

IN THE MATTER OF)
 APPLICATION)
 NOS. 54022 THROUGH 54030,)
 INCLUSIVE, FILED TO)
 APPROPRIATE THE)
 UNDERGROUND WATERS)
 OF SNAKE VALLEY (195))
 HYDROGRAPHIC BASIN)

**BRIEF REGARDING PROPER SCOPE OF
AIR QUALITY IMPACTS AND EVIDENCE**

State 'S EXHIBIT 46
 DATE: 8-1-08

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COME NOW, Marilyn J. Ambrose, Baker Advisory Board, Baker Ranches, Inc., Thomas
 A. Bath, Charles D. Berger, Reita Berger, Border Inn, William R. Coffman, County of White
 Pine, Don Duff, Garrett Family Trust, Carolyn Garrett (formerly Carolyn Garrett-Lehning), Jo
 Anne Garrett, Owen L. Gonder, Clay Iverson, James R. Jordan, Marie L. Jordan, Nevada
 Cattlemen's Association Eastern Unit, Nevada Farm Bureau Federation, New Age Gardeners,
 Tracy Lee Pelk, Margaret Pense, Robert B. & Gayle Robison, William R. & Katherine A.
 Rountree, Gerald Sand, Patsy Schlabsz, School of Natural Order, Thomas E. Sims, Snake Valley
 Senior Citizen Center, Snake Valley Volunteer Fire Department, Betty L. Steadman, Terrance P.
 and Debra J. Steadman, Dean C. Stubbs, John G. Tryon, Darwin and Kay Wheeler, and Darlene
 S. Whitlock (collectively "Protestants"), by and through their counsel of record, Simeon
 Herskovits of Advocates for Community and Environment, and local counsel Leah Wigren, and
 pursuant to the State Engineer's direction at the July 15, 2008 Prehearing Conference, hereby
 respectfully submit this Brief Regarding Proper Scope of Air Quality Impacts and Evidence.
 Because their protests broadly raised potential environmental impacts, including potential air
 quality impacts to recreational, aesthetic, and public health values, the Protestants believe that it

extraction. The statute requires the SE to consider the environmental consequences of a proposed interbasin transfer of water. Air quality impacts that result from groundwater extraction and export clearly would be among such consequences. The health of human communities, as well as plant and animal communities, depends on good air quality and will be adversely impacted should SNWA's proposed interbasin transfer result in increased dust emissions. Not only are dust emissions in and of themselves an environmental concern, the human beings, animals, and plants that are intended to be protected by the environmental impacts inquiry under NRS § 533.370(6)(c) also are dependent on good air quality. Therefore, the SE must evaluate air quality impacts in order to determine the effects on other aspects of the environment that he must evaluate pursuant to NRS § 533.370(6)(c).

Accordingly, potential dust impacts from SNWA's Snake Valley Applications are a serious environmental concern, and a necessary component of any adequate assessment of the environmental soundness of those applications.

2. Consideration Of Air Quality Impacts Is Within The Proper Scope Of NRS § 533.370(5), The Public Interest Provision Of Nevada Water Law

The State Engineer is statutorily mandated to reject SNWA's groundwater applications, pursuant to NRS § 533.370's public interest criterion, if he determines that granting the applications would threaten to be detrimental to the public interest. "[W]here there is no unappropriated water in the proposed source of supply, or where its proposed use or change conflicts with existing rights or with protectible interests in existing domestic wells as set forth in NRS 533.024, *or threatens to prove detrimental to the public interest, the State Engineer shall reject the application and refuse to issue the requested permit.*" 533.370(5). (emphasis added).

The term “public interest” is not defined by Nevada Water Law, and thus, the SE has the discretion to define its scope.

In the past, the SE has considered dust impacts as part of the public interest criterion. See Nevada State Engineer Ruling No. 3787, at 116 (March 1, 1991); Nevada State Engineer Ruling No. 3787A, at 16 (October 9, 1992) (supplemental ruling on remand); Pyramid Lake Paiute Tribe of Indians v. Washoe County, 112 Nev. 743, 752, 918 P.2d 697, 702 (1996) (appeal of SE Ruling No. 3787). Additionally, in the Spring Valley Ruling, the SE recognized that impacts to wetlands and plant life are relevant to the public interest criterion. Nevada State Engineer Ruling No. 5726, at 37-43 (April 16, 2007).

Although the SE declined to recognize the protest ground that increased emissions due to secondary growth impacts in Las Vegas is covered by the public interest criterion, that remote potential indirect result of SNWA’s proposed groundwater export project is distinct and very different from dust emissions in the area of origin that could be directly caused by a drawdown of groundwater levels.¹ It appears that the SE’s decision not to include this much more attenuated type of potential air quality concern was due to its extremely remote and only indirectly connected nature, rather than the fact that the impact is one of air quality. Therefore, neither the Spring Valley Ruling nor Cave, Dry Lake, and Delamar Valleys Intermediate Order No. 1 supports the argument that evidence concerning dust emissions may not be properly introduced by Protestants as part of their public interest case.

As the SE’s own previous interpretation of the public interest criterion indicates, when the resulting human health and environmental consequences are examined, it is clear that air

¹ Similarly, in Intermediate Order No. 1 in the Cave, Dry Lake, and Delamar Valleys proceedings, while the SE dismissed protest grounds relating to population growth and resulting air pollution in Las Vegas, he did not dismiss protest ground 31, which discussed air quality impacts more generally. See Nevada State Engineer, Intermediate Order No. 1, at 7, 8, & 14 (October 4, 2007).
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quality lies within the scope of the public interest criterion. As described in detail below, it is well documented that dust emissions can have serious human health and environmental consequences. Common sense would therefore mandate a consideration of such impacts when evaluating the public interest in a proposed water transfer.

While the State Engineer in the Spring Valley Ruling interpreted the public interest requirement to exclude the indirect result of increased emissions in Las Vegas resulting from increases in population supported by the transfer of water, the SE has in the past and here again should consider more directly related impacts of groundwater extraction such as health and environmental impacts resulting from increased dust emissions in the basin of origin as an element of the public interest provision of NRS § 533.370(5).

3. Protests Filed By Protestants Clearly Raised The Issue Of Potential Air Quality Impacts Of SNWA's Groundwater Export Project

In their protests to SNWA's Snake Valley Applications the Protestants clearly raised the issue of potential air quality impacts of SNWA's groundwater export project. Because it would be too cumbersome to include each air quality protest ground for each application, the following represent issues generally raised by protestants for various SNWA applications in Snake Valley. For example, Thomas A. Bath, the Border Inn, William R. Coffman, the Nevada Cattlemen's Association, Eastern Unit, Gayle J. Robison, Robert B. Robison, Dean C. Stubbs, and the County of White Pine protested various applications on the basis that they will deprive the area of origin of "water needed for its environment and economic well being and will unnecessarily destroy or damage environmental, ecological, scenic and recreational values that the state holds in trust for all its citizens" and "individually and cumulatively with other applications of the proposed project will exceed the safe yield of the Snake Valley Basin thereby adversely affecting phreatophytes and creating air contamination and air pollution in violation of State and Federal

Statutes, including but not limited to, the Clean Air Act and Chapter 445 of the Nevada Revised Statutes.” See, e.g., Coffman Protest, Attachment ¶ 12. There are many additional examples. For instance, the Garrett Family Trust, Carolyn Garrett, Jo Anne Garrett, Owen L. Gonder (and Don Duff as Mr. Gonder’s successor to the protest filed for application No. 54025), Clay Iverson, William R. Rountree, Gerald Sand, Patsy Schlabsz, School of the Natural Order, Thomas E. Sims, Snake Valley Volunteer Fire Department, Terrance and Debra Steadman, Darwin Wheeler, and Darlene S. Whitlock also protested various applications on the basis that groundwater extraction will threaten phreatophyte life, would lower the static water level, destroy environmental and ecological values, and would have other negative impacts. Baker Ranches protested on the ground that the application threatens springs, seeps, and phreatophytes. Perry P. and Betty Steadman and Tracy Lee Pelk protested on the ground that the applications put the health of the people in the valley in jeopardy. John Tryon protested on the ground that the appropriation will inevitably damage plant and animal life on the surface. Marie L. Jordan and the Nevada Farm Bureau Federation protested on the basis of a lowering of the groundwater level. Charles D. Berger and Rita Berger protested on the ground that the applications threaten the health of Snake Valley.

Most of the Protestants also expressly incorporated by reference protest grounds raised by other protestants to the same applications. Among the grounds adopted by Protestants in this way are the BLM’s protest ground that “[d]esertification will decrease habitat and forage . . . Soil erosion from wind and increased overland water flow will occur. Increased wind erosion will decrease the air quality in Snake Valley and adjacent Great Basin National Park,” and Gilbert Wilson, Jr.’s protest ground that the Water Grab will result in Owens Valley like conditions.

By explicitly listing air quality impacts as a result of groundwater extraction and incorporating still more air quality related protest grounds by reference, the Protestants plainly raised the issue and are entitled to introduce evidence relating to these impacts at the hearing on SNWA's Snake Valley Applications.

4. There Is A Substantial Issue Concerning The Potential For SNWA's Proposed Groundwater Export Project To Have Owens Valley-Like Air Quality Impacts Due To The Extermination of Phreatophytes And Resulting Massive Dust Emissions

Because they are likely to affect vegetation cover and species composition, groundwater drawdowns can affect air quality. This is because, in arid environments like Snake Valley, phreatophytic vegetation plays an important role in stabilizing soil and protecting against wind erosion. When this vegetation dies as a result of lowered groundwater table, the soil becomes exposed and is very vulnerable to wind erosion. See Marith C. Reheis, United States Geologic Survey, *Owens (Dry) Lake, California: A Human-Induced Dust Problem*, <http://geochange.er.usgs.gov/sw/impacts/geology/owens/>; Marith C. Reheis, *Dust deposition downwind of Owens (Dry) Lake, 1991-1994: Preliminary findings*, 102 J. Geophys. Res. 25999 (1997).

It is well settled that dust, or particulate matter, suspended in the air can cause serious health effects in humans, including a measured increase in mortality rates. See C. Arden Pope III & Douglas W. Dockery, *Health Effects of Fine Particulate Air Pollution: Lines that Connect*, 56 Air & Waste Manage. Assoc. 709-742 (2006). In addition, numerous studies such as the research of James Hansen, Tony Clarke, Kevin Noone, Charles Zender, and Mark Jacobson, have established that airborne particulate matter, aerosols such as soot and dust, can travel thousands of miles and can affect temperatures, snow albedo (reflectivity) and the regional, even global climate. An increase in the incidence and severity of dust storms can also affect

temperature and snowpack locally and regionally. The combined impacts will likely have serious consequences for land use and water management in coming decades. Such changes to snowpack include increased risk of winter flooding, reduced river flows and summer soil moisture, soil erosion and dust storms, and an increase in the number and severity of wildfires. S.A. Rauscher, et al., *Future changes in snowmelt-driven runoff timing over the western United States*, J. Geophysical Research Letters (2008).

SNWA's proposed interbasin transfer of groundwater threatens to lower the water table throughout Snake Valley and hydrologically connected basins to such a degree as to deplete the local fragile phreatophytic plant community, destabilize valley soils, and create Owens Valley-like dust bowl conditions. As such, dust emissions resulting from SNWA's proposed groundwater export could cause serious environmental impacts in Snake Valley and beyond.

Further, in negotiating the dismissal of federal agency protests from the Spring Valley Hearing, SNWA conceded this point by agreeing to prevent, monitor, and mitigate regional air quality impacts caused by the project's potential impacts to groundwater dependent vegetation. See Stipulation for Withdrawal of Protests (September, 2006). Thus, SNWA itself recognizes that air quality impacts of groundwater withdrawal are relevant and must be addressed. As SNWA's actions concede, these potential air quality impacts present significant human health and environmental concerns that the SE must consider in the hearing on SNWA's Snake Valley Applications.

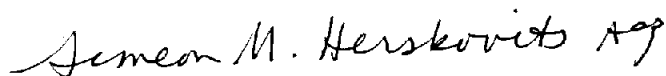
5. Air Quality Evidence Will Assist The State Engineer In Making A Scientifically Well-
Grounded And Well Reasoned Decision

To properly fulfill his charge the State Engineer must evaluate all available relevant evidence and come to a sound, well-informed, decision that protects senior water rights, the environment, and future economic growth in the affected area pursuant to the pertinent statutory criteria. In keeping with this mandate, the State Engineer has historically made a point of basing his decisions on the best available evidence. Because air quality evidence will substantially assist the State Engineer in determining the potential biological and other environmental impacts of SNWA's proposed groundwater export from Snake Valley, this evidence should be considered by the State Engineer at the hearing on SNWA's Snake Valley Applications.

CONCLUSION

Protestants respectfully request that the SE reaffirm his previous findings that evidence of potential air quality impacts resulting from SNWA's proposed water export project are relevant to the environmental soundness of an interbasin transfer under NRS § 533.370(6) and that air quality concerns are relevant to the public welfare criterion of NRS § 533.370(5).

Respectfully submitted,



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CERTIFICATE OF SERVICE

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